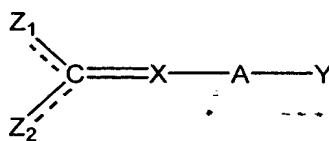


CLAIMS

1. A method for treating a subject afflicted with Transmissible Spongiform Encephalopathies (TSEs) comprising administering to the subject an effective amount of creatine, creatine phosphate or a creatine compound or a salt thereof, such that said subject is treated for said TSE.
2. The method of claim 1 wherein the subject is a mammal.
3. The method of claim 2 wherein the subject is a human.
4. The method of claim 2 wherein the subject is cattle.
5. The method of claim 1 wherein said TSEs is scrapie.
6. The method of claim 1 wherein said TSEs is Bovine Spongiform Encephalopathy (BSE).
7. The method of claim 1 wherein said TSE is Creutzfeldt-Jakob disease (CJD).
8. A method for prevention or treatment of a subject afflicted with TSE comprising administering an effective amount of a creatine compound to said subject such that the subject is treated for TSE, wherein said creatine compound is of the general formula:



and pharmaceutically acceptable salts thereof, wherein:

- a) Y is selected from the group consisting of: $-CO_2H$, $-NHOH$, $-NO_2$, $-SO_3H$, $-C(=O)NHSO_2J$ and $-P(=O)(OH)(OJ)$, wherein J is selected from the group consisting of: hydrogen, C_1 - C_6 straight chain alkyl, C_3 - C_6 branched alkyl, C_2 - C_6 alkenyl, C_3 - C_6 branched alkenyl, and aryl;

b) A is selected from the group consisting of: C, CH, C₁-C₅alkyl, C₂-C₅alkenyl, C₂-C₅alkynyl, and C₁-C₅ alkoyl chain, each having 0-2 substituents which are selected independently from the group consisting of:

- 1) K, where K is selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;
- 2) an aryl group selected from the group consisting of: a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy; and
- 3) -NH-M, wherein M is selected from the group consisting of: hydrogen, C₁-C₄ alkyl, C₂-C₄ alkenyl, C₁-C₄ alkoyl, C₃-C₄ branched alkyl, C₃-C₄ branched alkenyl, and C₄ branched alkoyl;

c) X is selected from the group consisting of NR₁, CHR₁, CR₁, O and S, wherein R₁ is selected from the group consisting of:

- 1) hydrogen;
- 2) K where K is selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;
- 3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;
- 4) a C₅-C₉ α-amino-ω-methyl-ω-adenosylcarboxylic acid attached via the ω-methyl carbon;

5) a C₅-C₉ a-amino-w-aza-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon; and

6) a C₅-C₉ a-amino-w-thia-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon;

d) Z₁ and Z₂ are chosen independently from the group consisting of: =O, -NHR₂, -CH₂R₂, -NR₂OH; wherein Z₁ and Z₂ may not both be =O and wherein R₂ is selected from the group consisting of:

1) hydrogen;

2) K, where K is selected from the group consisting of: C₁-C₆ straight alkyl; C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

4) a C₄-C₈ a-amino-carboxylic acid attached via the w-carbon;

5) B, wherein B is selected from the group consisting of: -CO₂H, -NHOH, -SO₃H, -NO₂, OP(=O)(OH)(OJ) and -P(=O)(OH)(OJ), wherein J is selected from the group consisting of: hydrogen, C₁-C₆ straight alkyl, C₃-C₆ branched alkyl, C₂-C₆ alkenyl, C₃-C₆ branched alkenyl, and aryl, wherein B is optionally connected to the nitrogen via a linker selected from the group consisting of: C₁-C₂ alkyl, C₂ alkenyl, and C₁-C₂ alkoyl;

6) -D-E, wherein D is selected from the group consisting of: C₁-C₃ straight alkyl, C₃ branched alkyl, C₂-C₃ straight alkenyl, C₃ branched alkenyl, C₁-C₃ straight alkoyl, aryl and aroyl; and E is selected from the group consisting of: -(PO₃)_nNMP, where n is 0-2 and NMP is ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; -[P(=O)(OCH₃)(O)]_m-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; -[P(=O)(OH)(CH₂)]_m-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or

the aromatic ring of the base; and an aryl group containing 0-3 substituents chosen independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO₂G, where G is independently selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, C₄-C₆ branched alkoyl, wherein E may be attached to any point to D, and if D is alkyl or alkenyl, D may be connected at either or both ends by an amide linkage; and

7) -E, wherein E is selected from the group consisting of - (PO₃)_nNMP, where n is 0-2 and NMP is a ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; -[P(=O)(OCH₃)(O)]_m-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; -[P(=O)(OH)(CH₂)]_m-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; and an aryl group containing 0-3 substituents chose independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO₂G, where G is independently selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, C₄-C₆ branched alkoyl; and if E is aryl, E may be connected by an amide linkage;

e) if R₁ and at least one R₂ group are present, R₁ may be connected by a single or double bond to an R₂ group to form a cycle of 5 to 7 members;

f) if two R₂ groups are present, they may be connected by a single or a double bond to form a cycle of 4 to 7 members; and

g) if R₁ is present and Z₁ or Z₂ is selected from the group consisting of -NHR₂, -CH₂R₂ and -NR₂OH, then R₁ may be connected by a single or double bond to the carbon or nitrogen of either Z₁ or Z₂ to form a cycle of 4 to 7 members.

9. The method of claim 8, wherein said subject is cattle.

10. The method of claim 8, wherein said subject is human.

11. The method of claim 8 wherein the treatment comprises reducing or eliminating symptoms associated with a preexisting TSEs disease of the nervous system within the subject.

12. The method of claim 8 wherein the treatment comprises preventing the occurrence of TSEs diseases of the nervous system within the subject.

13. The method of claim 8 wherein the creatine compound is creatine in salt and hydrated forms.
14. The method of claim 8 wherein the creatine compound is creatine phosphate.
15. The method of claim 8 wherein the creatine compound is cyclocreatine.
16. The method of claim 8 wherein the creatine compound is cyclocreatine phosphate.
17. The method of claim 8 wherein the creatine compound is homocyclocreatine.
18. The method of claim 8 wherein the creatine compound is 3-guanidinopropionic acid.
19. The method of claim 8 wherein the creatine compound is guanidinoacetate.
20. The method of claim 8 wherein the creatine compound is creatine-pyruvate or creatine ascorbate.
21. The method of claim 8 further comprising coadministering to the subject an effective amount of an approved drug for the treatment of diseases of the nervous system.
22. The method of claim 8 further comprising coadministering to the subject an effective amount of a supplement that protects cells of the nervous system.
23. The method of claim 22, wherein said supplement is selected from the group consisting of vitamins, antioxidants, and energy enhancing agents.
24. The method of claim 8, wherein said creatine compound is administered orally.
25. The method of claim 8, wherein said creatine compound is administered as a food supplement.
26. The method of claim 8, wherein said effective amount is effective to prevent TSEs diseases.

27. The method of claim 25 wherein the creatine compound is creatine-pyruvate or creatine- ascorbate.
28. A method of claim 25 wherein the creatine compound is a guanidino benzoate.
29. A dietary supplement for the treatment or prevention of TSEs in a subject comprising an effective amount of a creatine, creatine phosphate, or a creatine compound or a salt thereof to treat or prevent TSEs in said subject.
30. The dietary supplement of claim 29, wherein said subject is cattle.
31. The dietary supplement of claim 29, wherein said TSE is BSE.
32. The dietary supplement of claim 29, wherein said dietary supplement comprises creatine.
33. The dietary supplement of claim 29, wherein the creatine compound is creatine phosphate.
34. The dietary supplement of claim 29, wherein the creatine compound is cyclocreatine.
35. The dietary supplement of claim 29, wherein the creatine compound is cyclocreatine phosphate.
36. The dietary supplement of claim 29, wherein the creatine compound is homocyclocreatine.
37. The dietary supplement of claim 29, wherein the creatine compound is 3-guanidinopropionic acid.
38. The dietary supplement of claim 29, wherein the creatine compound is guanidinoacetate.
39. The dietary supplement of claim 29, wherein the creatine compound is creatine-pyruvate or creatine ascorbate.